DOCUMENT RESUME

ED 133 652 CG 010 996

AUTHOR Cassel, Russell N.
TITLE The Computerized Vocational Guidance System (VOCGUYD).
PUB DATE [75]
NOTE 8p.; For related documents, see CG 010 987 to 989

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Computer Oriented Programs; *Educational Guidance; *Information Systems; *Occupational Guidance; Personal Interests; Program Descriptions; Secondary Education; Test Results; Vocational Aptitude; *Vocational Development

ABSTRACT

The Computerized Vocational Guidance System (VOCGUYD) is designed primarily to relate the world of an individual to the world of work in a meaningful yet comprehensive manner. It is intended for use by individuals in their own life career planning, and is designed specifically to provide a scientific means for the reducing of career planning choices from the many to the few for more intensive study with an appropriately qualified Career Guidance Counselor. It serves as an effective vehicle to foster career maturity in individuals by providing both "information about" (through CAI auxiliary guidance programs) and "experience with" (through use of Search and Screening criteria) fundamentals that are deemed to be paramount and critical to real job success. (Author)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED133652

THE COMPUTERIZED VOCATIONAL GUIDANCE SYSTEM (VOCGUYD)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

RUSSELL N. CASSEL, Ed.D.
Editor, PROJECT INNOVATION,
Box 566,
Chula Vista, California 92010

The Computerized Vocational Guidance System (VOCGUYD) is designed primarily to relate the world of an individual to the world of work in a meaningful yet comprehensive manner. It is intended for use by individuals in their own life career planning, and is designed specifically to provide a scientific means for the reducing of career planning choices from the many to the few for more intensive study with an appropriately qualified Career Guidance Counselor. It serves as an effective vehicle to foster career maturity in individuals by providing both "information about"(through CAI auxiliary guidance programs) and "experience with" (through use of Search and Screening criteria) fundamentals that are deemed to be paramount and critical to real job success.

Computerized Guidance Programs

VOCGUYD is a revised and completely up-dated version of an older program by a similar title for which the author has served as the major development architect over the past 8 years at THE UNIVERSITY OF WISCONSIN (now retired). It is one of a series of computerized programs developed largely by the author, some of which are intimately related to effective career planning: (1) DEDEV-The Computerized Decision Development System,(2) EDGUYD-The Computerized Educational Guidance System, and (3) HUMRELAT-The Computerized Human Relations System.

Just as one would not expect an individual to play classical music on a piano unless indeed one has already learned to play the piano; so one can not expect an individual to do effective career planning unless one has already

developed competency in scientific decision making, and DEDEV is intended for this purpose. Similarly, marketable skills necessary for job success remain the product of school experiences, and EDGUYD is useful to this end. The real keystone to job progression remains successful interaction with people, and HUMRELAT serves for this aspect of career maturity.

World of Work

VOCGUYD contains all of the 1326 job titles included in The Occupational Outlook Handbook for 1974-75 together with their major "shredouts". Two major types of such shredouts are involved: (1) different specialties within the same career field-for example, in the nursing field we might include psychiatric nurses, public health nurses, pediatric nurses, general nurses, etc.-or for airplane engine mechanic a much wider array of different airplanes such as B-52, DC-9,A-111, etc.; and (2) different levels of skill within the same career field-may involve a reading teacher with 2 years of college preparation ranging to the highly sophisticated Ph.D. university professor-or the collegiate athlete in relation to the professional where money received becomes discerning factor.Based on the 22 Job Skill Requirement Areas contained in The Dictionary of Occupational Titles (DOT) these job titles are distributed as follows:

Number	Job Skill Requirement Areas	No.Jobs	%age
1	Art	52	03.9
2	Business	46	03.5
3	Clerical	106	08.0
4	Counseling, Guidance and Social Work	33	02.5
5	Crafts	109	08.3
6	Education and Training	48	03.6
7	Elemental	217	16.4
8	Engineering	130	09.8
9	Entertainment	46	03.5
10	Farming, Fishing and Forestry	69	05.2
11	Investigation, Inspection and Testing	56	04.2
12	Law and Law Enforcement	32	02.5
13	Machine work	59	04.4

14	Managerial and Supervisory	59	04.4
15	Mathematics and Science	36	02.7
16	Medicine and Health	58	04.3
17	Merchandising	19	01.4
18	Music	13	00.9
19	Personal Services	57	04.3
20	Photography and Communication	56	04.3
21	Transportation	07	00.5
22	Writing	18	01.4
	TOTAL	1326	100

World of Individual

The world of the individual is comprised of 18 different criteria which are designed for Search and Screening (S&S) by the computer in the world of work. Each of these criteria deal squarely with considerations that are critical in relation to job and career success. They have been grouped into five dimensions of related criteria which have been defined as follows:

(1) Personal Interest of Individual - seven different occupational interest classification schemes and inventories;

(2) Special Aptitudes Related to School - verbal, numerical, and abstract;

(3) Special Aptitudes Related to Work - clerical, mechanical, and space;

(4) Super's Work Value Factorial Scores - material wealth, goodness of life, self-expression, and behavioral control; and

(5) School Success as Depicted by Grade Point Average.

The VOCGUYD Student Work Sheet

The VOCGUYD Student Work Sheet is a four page guide prepared for the use of individuals desiring to use VOCGUYD, and provides a functional index for each of the 18 S&S criteria.It contains the "Self Projected Profile on Select Job Success Criteria" form which serves as an initial planning base, planning provision for four separate Search and Screening Missions on VOCGUYD, and serves as a functional part of one's personal record.

Self Projected Profile

Where individuals have taken The Differential Aptitude Test Battery (DAT), The General Aptitude Test Battery (GATB), Super's Work Value Inventory or other appropriate psychological instruments such scores may be appropriately used to accomplish the "Self Project Profile on Select Job Success Criteria". Where no such scores are available, the individual may accomplish the profile based on own estimate of what such scores might be in relation to typical individuals. The profile contains six special aptitudes, four work values, and school grade point average. Detailed instructions for use of The VOCGUYD Student Work Sheet are contained in a VOCGUYD Manual available for this purpose.

Personal Likes Pattern

The Personal Likes Pattern (PLP) consists of from maybe 4 to 7 of the 18 different S&S criteria contained in VOCGUYD, and which are designed to reflect accurately the "world of the individual". Emphasis in the development of the PLP is to be placed on personal interest, and with aptitude, work values, and even grade point average considered as being secondary. Typically the first of such S&S criteria might represent one of the areas from either the Kuder or Ohio interest inventories. A second S&S criterion might be based on Roe's Socio-Economic Hierarchy-professional, semiprofessional, clerical or business, skilled trades, semi-skilled trades, or laborer. The third S&S criterion might derive from the DOT Interest Areas-prefers working with data, persons, things, data and persons, etc. The fourth might deal with School Level for Job Entry-high school graduate, two years of college, college graduation, etc. For example, a Kuder(4), Roe (6),DOT Interest (2), and School Level (8) depicts a PLP for an individual interested in persuasion, becoming a professional, working with persons, and doing college or university graduate preparation. It might well involve law, ministry, sales, acting, management, military, political, etc.

Narrowing of Career Choices

This represents a 2 stage function in which the computer seeks to relate the world of the individual as represented by the PLP to the world of work as represented by the 1326 job titles contained in VOCGUYD.

Search and Screening Function. It is important that the PLP criteria be arranged in order of their importance to the individual involved, with the most important ones first. Also, individuals should begin with no fewer than maybe 4 or 5 S&S criteria, for the computer applies the PLP permutation to the world of work job bank as a "concert" entity; something not feasible for a Career Guidance Counselor. For example, if a S&S mission were begun with a PLP including 7 criteria and no job titles were found that fit such a PLP permutation, the computer continues to drop the last criterion and do a second search and screening. If no job titles are found in the second screening, the computer drops the last S&S criterion and performs another, and continues using this procedure of dropping the last S&S criterion until either all criteria are exhausted or job titles are found in the process.

Computer-Based Interrogation. When job titles are uncovered or identified in the PLP S&S mission, such job titles may be presented on request by the computer 10 at a time or fewer if there are not that many identified. If an individual indicates an interest in any of the job titles identified, the computer begins the "interrogation" process to determine more precisely the agreement between the world of the individual and the specific characteristic requirements for such particular job success. Five questions are posed in turn each bearing directly on success for the job involved, with percentage weights assigned in proportion to the importance of the conditions described, and with the total equaling 100 percent. For example, if an individual does not wish to go to college in relation to the job of teacher, it might cost him as much as 35 percent towards lack of goodness of fit between world of individual and predicted job success as a teacher.

Career Success Index

The Career Success Index (CSI) is a number that depicts the degree of agreement between the world of the individual and the requirements for a specific job. Adjective ratings depicting such degree of agreement range from "poor" through "low" and "high" average to "above average" and "superior". Where the CSI for VOCGUYD is "average" or better, it is suggested that a deeper analysis be made of such jobs with the aid of a Vocational Guidance Counselor.

Suggested Uses of VOCGUYD

Developing Career Maturity

This use is recommended for junior high school students, senior high students not yet ready for precise career planning, and for senior high school students who have without a doubt already identified their own precise career plan. For example, this might include the son or daughter of a village physician, whose father and grand-father were the same village physician, and where such son or daughter plans to prepare to take the place of the father. In developing career maturity typically from 4 to 8 persons may work on a single console in interaction for time-sharing with a computer. Always, one or more of the individuals involved should posess a reading skill at the fifth grade level or better. The decision making should entail a typical discussion and group process, and operation of the keyboard should be rotated among the participants.

Precise Career Planning

This, to be sure, is for the individual who is concerned with more precise career planning, and desires to narrow career choices from the many to the few for more intensive study. Here, The VOCGUYD Student Work Sheet should be used for planning and record keeping purposes. While other persons may be involved as observers, only a single person makes decisions and operates the console. Generally, the objective is to secure 4 or 5 job career titles where the CSI is average or better, and for more concentrated study purposes.

VOCGUYD Computer Adaptations

VOCGUYD has been developed largely under Federal monies and is therefore considered to be "public read" , and is generally available to interested users on request. Presently, VOCGUYD has been written in FORTRAN V and in Extended Basic for use on the UNIVAC 1100 series and the DIGITAL PDP-11, respectively. Also, it has been adapted for use on the HONEYWELL 6000. The Source deck includes approximately 500 cards, and the data base 10,400 IBM cards or 66 blocks of computer memory space. It should operate effectively with about from 12 to 15K of CPU memory.

References

1. Cassel,R.N. "UWM computerized guidance programs" in Career Education and the Technology of Career Development. Palo Alto, California:American Institutes for Research, 1971.

2. Cassel, R.N. The Psychology of Decision Making. North Quincy, Massachusetts: The Christopher Publishing House,1973.

3. Cassel, R.N. Decision counseling. Education, 1973a,93(3),217-227.

4. Cassel, R.N. EDGUYD Manual-The Computerized Educational Guidance System. Box 566, Chula Vista, California: PROJECT INNOVATION, 1975.

5. Cassel, R.N., and Mehail, T. The Milwaukee Computerized Vocational Guidance System(VOCGUID). Vocational Guidance Quarterly,1973,21(3),206-213.

6. Cassel, R.N.,Atwood, J.G., and Lie, A.Y.N. The Computerized Human Relations Program. College Student Journal Monograph,1973,7(2), Part 2.

7. Flanagan,J.C., et.al. The First 15 Years of Project TALENT;Implications for Career Guidance. Vocational Guidance Quarterly, 1973,21(4),8-14.

8. Tiedeman, D.V. An Informal Assessment of The University of Wisconsin-Milwaukee Computerized Guidance Programs. Palo Alto, California: American Institutes for Research, 1972.